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Korean and U.S. Forces and Responsibilities in the Changing Asian Security Environment

Executive Summary

Charles Wolf, Jr., Oh Kwan-Chi, James H. Hayes,
Norman D. Levin, Han Yong-Sup

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Prepared for the
Director of Net Assessment,
Office of the Secretary of Defense
Under Secretary of Defense for Policy

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PREFACE

This executive summary is a joint report by Dr. Oh Kwan-Chi, Director of the Arms Control Center of the Korea Institute for Defense Analyses (KIDA); Colonel James H. Hayes (USA, retired), Mr. Norman Levin, and Dr. Charles Wolf, Jr., senior members of RAND's research staff; and Mr. Han Yong-Sup, a doctoral fellow in the RAND Graduate School. The report is based on an 18-month collaborative research project performed between May 1989 and December 1990 by RAND and KIDA. It draws heavily on component studies of that research, as indicated below. Unless otherwise indicated, the views expressed represent the full agreement of the five authors.

RAND's participation in the joint study was sponsored by the Director of Net Assessment and the Under Secretary of Defense for Policy, under RAND's National Defense Research Institute, a federally funded research and development center supported by the Office of the Secretary of Defense and the Joint Staff. The KIDA work was sponsored by the Korean Ministry of National Defense. Initial portions of the work have been briefed in the Department of Defense in Washington and at KIDA in Seoul, Korea.

This report should be of interest to policymakers in the defense and foreign policy communities of both Korea and the United States.

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SUMMARY

This report summarizes a joint study by RAND and the Korea Institute for Defense Analyses (KIDA) on U.S.-Korean force planning and the sharing of roles and burdens in the coming decade. Its aim is to consider possible changes in the forces and burdens of the allies in view of the changing strategic environment, altered economic and technological capabilities, and political constraints, while maintaining a durable alliance.

The study identifies alternative security environments and conflict contingencies and draws from them policy guidelines for combined military planning. It then assesses the relative changes in U.S. and Korean economic and technological capabilities as well as the resource constraints faced by the allies. The study then focuses on alternative Korean and U.S. force structures, roles, command relationships, and cost implications.

The danger of large-scale warfare on the Korean Peninsula could arise in a political environment that we have described as pluralistic open détente without North Korean participation. This war could arise from multiple sources: North Korean miscalculation, succession turmoil, leadership struggles, or political instability in South Korea as a military response to terrorist activity. The prospect for war could be heightened by perceptions in North Korea of diminished U.S. commitment to its alliance with South Korea.

The assessment of long-term economic and technological trends suggests that Korea's ability to shoulder a relatively greater share of the combined defense burden has measurably increased, and will continue to do so.

RAND suggested four U.S. force-reduction alternatives designed to maintain a "trip wire" on the Korean Peninsula while maintaining constant combat effectiveness in the combined forces. The alternatives propose a combination of cuts in support or combat forces of the United States, with South Korea providing compensating support or combat power. The cuts could be adopted independently or sequentially. The cost impact of these alternatives amounts to a maximum annual saving for the United States of about \$1.6 billion and a maximum investment cost to Korea of about \$7.8 billion.

KIDA developed six alternatives encompassing the original RAND alternatives. The KIDA alternatives were designed to close the gap in

combat power between South and North Korea. Simulations by KIDA with these forces and expenditures of between 4.5 and 6 percent of the Korean GNP between 1991 and 2000 indicated that a postulated North Korean attack could be stopped before reaching Seoul—the greater the expenditure, the sooner and the farther north would the attack be stopped.

The study concludes that:

- The United States and South Korea should reaffirm the mutual importance of their alliance.
- The two allies should formally declare their intention for South Korea to be principally responsible for its own defense by 2000.
- This intention should be gradually implemented consistent with South Korea's force improvement and progress in inter-Korean relations.
- South Korea's force improvement should reflect the principle of comparative advantage by focusing on ground component capabilities while retaining U.S. air and naval support.
- In light of the relative growth of South Korea's economic and technological capabilities, it should bear a larger share of combined defense burdens.
- Every means—nonmilitary as well as military—should be used to transmit unambiguous signals to North Korea and to the world at large concerning the vitality of the alliance.

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1. INTRODUCTION

The enhanced security and stability that result from the U.S.-Korean alliance, and from Korean and U.S. forces, represent joint benefits realized by both alliance members independent of how the joint costs are shared. Thus, the alliance exemplifies a "public" or "collective" good. In the rapidly changing international environment—in the Asia-Pacific region as well as in Europe and the world at large—the U.S.-Korean alliance is an important asset to both members. For Korea,¹ the alliance provides deterrence of the North and protection against the major powers in the region. For the United States, the alliance is a symbol of the reliability and effectiveness of the U.S. commitment and a source of support for U.S. security interests in the region.

The aim of the research summarized in this report is to consider possible changes in the forces and burdens of the Korean and U.S. allies to reflect the altered security environment, advances in military technology, and changes in the relative economic and technological capabilities of the two allies, while maintaining the alliance and ensuring its durability. The research on which this report is based, and the report itself, is a collaborative undertaking between RAND and the Korea Institute for Defense Analyses (KIDA), respectively sponsored by the U.S. Department of Defense and Korea's Ministry of National Defense.

This report summarizes the principal findings of the joint KIDA-RAND effort in the following sequence: Sec. 2 describes several alternative security environments, conflict contingencies, and policy guidelines for United States-Republic of Korea (ROK) military planning; Sec. 3 summarizes our assessment of changing relative U.S. and Korean economic and technological capabilities, as well as the resource constraints faced by both alliance members; Sec. 4 summa-

¹The terms "Korea," "South Korea," and "Republic of Korea" are used interchangeably in this report.

rizes our joint research on alternative Korean and U.S. force structures, roles, command, and cost sharing; and Sec. 5 recounts the principal conclusions of the project as a whole.²

²The separate sections of this report have drawn on the following component studies: Norman D. Levin, *Security Trends and U.S.-ROK Military Planning in the 1990s*, RAND, N-3312-NA/USDP, 1991; Charles Wolf, Jr., and Yong-Sup Han, *Korean and U.S. Economic and Technological Capabilities to Support Defense Burdens*, RAND, N-3227-NA/USDP, 1991; and Oh Kwan-Chi, Cha Young-Ku, and KIDA staff, "ROK-U.S. Forces and Responsibilities in the Changing Asian Security Environment," Korea Institute for Defense Analyses, Seoul, 1990. The report has also drawn on other RAND work by James H. Hayes and John Schank dealing with the capabilities and costs of alternative combinations of Korean and U.S. forces.

2. ALTERNATIVE SECURITY ENVIRONMENTS

The project team began by examining broad global and regional trends to assess their likely effect on the future Asian security environment and to identify plausible military contingencies that could test U.S. and ROK forces in the 1990s.

The separate RAND and KIDA analyses are in broad agreement. Both agree that a new era has begun, largely as a result of the global crisis of communism and the related end of the Cold War. Asian communism differs from European communism, and political change has not been as dramatic in Asia as elsewhere. Nevertheless, the systemic communist crisis and dramatic improvement in superpower relations have created a new international environment that will inevitably affect regional security. The positive effect has been a general relaxation of international tensions. The negative effect is increasing uncertainties about the future of the key communist countries and heightened dangers of internal unrest and local or regional conflicts.

Both research teams concur on the historic relative shift of economic power to the Pacific and continued economic dynamism of most of the noncommunist states of the region. Sustained high rates of economic growth are bolstering the self-confidence of Asian governments while increasing their ability to play larger roles in their own self-defense. South Korea is a leading example of this development. This fundamentally positive trend is mixed with a range of uncertainties and potential regional instabilities. These arise from the fragilities of the region's new democracies, the proliferation of advanced technologies and weapons, and the continuation of traditional animosities and unresolved historic and territorial disputes. Looming leadership transitions in both communist and noncommunist Asia heighten these uncertainties, as does rising nationalist sentiment throughout the region.

The uncertainties on the Korean Peninsula are especially acute, particularly in North Korea. Its continuing economic stagnation is accompanied by signs of political dissension and major diplomatic setbacks. Kim-Il Sung pursues his unprecedented effort to install his son as his successor. The dramatic developments in the Soviet Union and Eastern Europe intensify North Korea's difficulties by heightening its international isolation, weakening its ability to rely on allied support for both economic development and "reunification," and com-

plicating the task of political succession. As Pyongyang continues to back itself into a corner, it could well become even more unpredictable because of attenuation of the constraints that might ensue from its links with the Soviet Union and China. Influencing its behavior requires a delicate combination of "carrots" and "sticks."

At the same time, the demonstrable success and resilience of South Korea should not obscure internal tensions and potential instabilities. Although economic growth continues, albeit at a slower rate, double-digit inflation and skyrocketing housing prices are creating a new class of "have nots" with tenuous commitments to the existing order. At the same time, rapid wage increases and labor-management unrest hinder Seoul's international competitiveness. Progress toward democratization is tempered by stagnant political development and uncertain leadership. Continuing, if reduced, student agitation is accompanied by growing extremism in the labor and farmer movements. Cutting across these problems is a wide and growing gap between public expectations and reality. These problems are generating unprecedented pressures on defense spending and are weakening popular support for the U.S. military presence. Both RAND and KIDA recognize that potential instabilities within the two Koreas represent the single greatest source of possible military conflict on the peninsula in the 1990s.

Because of these complexities and uncertainties, the RAND and KIDA research teams agreed that a single projection of existing trends would not be useful. Instead, we identified four main alternative environments in an effort to bound the range of plausible futures.¹

Both research teams believe that the danger of large-scale warfare on the Korean Peninsula remains. Indeed, this appears to be the most likely kind of conflict in the first environment, which we have described as pluralistic open détente without North Korean participation. This environment would involve a further reduction of tensions among the major powers, rising international political, economic, and cultural interactions; increasing political multipolarity as new actors rise to play larger roles; and a major U.S. retrenchment from South Korea without significant changes in North Korea. And this environment appears to be the closest of the four to what is actually emerging in the region. In this environment, a major war on the peninsula could arise from multiple sources: North Korean desperation or miscalculation, succession turmoil in Pyongyang, a

¹For further descriptions of these environments, see Levin, 1991.

North Korean leadership struggle even before formal succession, political instability in South Korea, South Korean military retaliation to terrorist activity by North Korea, and preemptive military action by South Korea against Pyongyang's nuclear facilities. Prospects for such a conflict would be heightened by perceptions in either of the two Koreas of significantly diminished U.S. resolve. Among the several environments we have described, this is the one most likely to witness a major peninsular conflict.

Most of the other environments developed in the RAND-KIDA study would see conflict at lower points on the spectrum:

- In the second alternative, "pluralistic détente with North Korea participating," North Korea would initiate internal reforms and change its longstanding orientation to South Korea and the outside world. In this case, the likelihood of conflict on the peninsula would presumably diminish. Instead, if U.S. and Korean interests were subject to a military challenge in this relatively benign environment, the contingency would probably be an "out of area" conflict, involving a joint alliance interest in protecting sea lines of communication.
- The third environment, "loose bipolarity," differs from the previous ones in the lesser tension reduction between the superpowers and more limited "multipolarity." The danger of large-scale warfare on the peninsula would remain, but a more active (albeit increasingly "supportive") U.S. role in South Korea's defense would probably continue to deter major North Korean aggression. Accordingly, were conflict to occur, the most likely form would be less than a major local war—for example, commando raids, terrorist activities, or cross-border firings.
- In the fourth alternative, "communist disintegration," a complete disintegration of the communist powers and unification of Korea on South Korean terms might ensue. In this case, the most likely conflict would probably be transnational political strife rather than military conflict, resulting from ethnic or nationalist struggles.

Because of these uncertainties, the RAND and KIDA analyses highlight the importance of maintaining a credible deterrent to North Korean aggression. Large-scale warfare remains the most dangerous possibility, but not the most likely. As long as the United States is perceived as fully committed to South Korea's defense, and the two sides together maintain sufficient defense capability to punish severely possible aggression by Pyongyang, the conflict contingencies most likely to arise would be less than major, local war.

In view of these trends and projections, both teams concurred on the following policy guidelines:

- *The primary U.S.-ROK military objective over the coming period should remain deterrence.* In the absence of change in North Korea and in light of the uncertainties on the Korean Peninsula, an ability to deter—and if necessary defend against—a large-scale North Korean attack should remain paramount.
- *Deterrence should be considered in terms of combined U.S.-ROK capabilities.* Because economic resources are increasingly constrained, the aim should be to optimize our combined combat capabilities.
- *Linkage should be maintained between further U.S. military drawdowns and specific changes in North Korea, without holding desirable U.S. and ROK adjustments hostage to North Korean actions.*
- In restructuring and reducing U.S. forces, we should:
 - *Proceed gradually.*
 - *Maintain ample symbols* of the continued U.S. commitment to the Korean alliance, especially by maintaining the symbolically important U.S. flag over the Combined Forces Command (CFC) headquarters.
 - *Maintain the U.S. Air Force units.*
 - *Increase air and naval reinforcement capabilities in tandem with force reductions.*
 - *Aim toward the gradual assumption by South Korea of full operational control over ROK forces.* When control is transferred, a combined planning mechanism should be established (a "U.S.-ROK Combined Defense Planning Council"?) to symbolize active U.S. involvement and coordinate operational planning.
 - *Examine ways in which arms control measures might enhance the balance of power on the peninsula.*
- *Inducements to encourage North Korean changes should be given priority attention.* A desperate, cornered North Korea is in no one's interests.
- *Expansion of alliance roles should be explored to foster Korean participation in regional security cooperation with the United States.*

- *Greater analytic effort should be paid to the danger of surprise.* Although future global events may not be as dramatic as those of the 1989–1990 period, the basic trends provide little ground for stable expectations.

3. U.S. AND KOREAN ECONOMIC AND TECHNOLOGICAL CAPABILITIES AND CONSTRAINTS

In light of the joint interests of South Korea and the United States in maintaining a secure military balance in the Peninsula, the allies must consider an appropriate and equitable sharing of the costs and burdens of the alliance. Toward this end, it is important to compare the changing economic and technological capabilities of the United States and Korea. In this comparison, economic and military trends of the United States and Korea are estimated for the period from 1980 to 2000 in terms of three major indicators: gross national product (GNP), per-capita GNP, and military spending. In addition, technological capabilities of the United States and Korea are reviewed from 1980 through 1989 using proxy indicators to measure inputs—R&D spending, scientists and engineers engaged in R&D, and outputs—total factor productivity, number of granted patents, technology balance of payments, and degree of indigenous weapon production.¹

With respect to economic capabilities and military spending capabilities, three points are worth noting:

- *The Korean economy is substantially increasing in size relative to the U.S. GNP.* Whereas the South Korean economy was between one-fiftieth and one-twenty-fifth the size of the U.S. GNP in 1980, it will be between one-twentieth and one-fifteenth the size of the U.S. economy by 2000.
- *Per-capita Korean GNP is also increasing rapidly relative to that of the U.S.* Whereas Korea's per-capita GNP was between 10 and 25 percent of the U.S. per-capita GNP in 1980, Korea's per-capita GNP will be between 28 and 40 percent of the corresponding U.S. figure by 2000.
- *Korean military spending is probably going to rise relative to that of the United States, or at least to fall less rapidly in terms of the military spending share in GNP.*

Our assessment of the changing technological capabilities of the two countries led to several conclusions:

¹See Wolf and Han, 1991.

- During the 1980s, Korean research and development spending rose substantially relative to that of the United States.
- The number of scientists and engineers employed in R&D in Korea has risen considerably more rapidly than in the United States.
- Total factor productivity in Korea has grown at an annual rate at least 50 percent above that in the United States.
- The predominance of U.S. patent awards over those granted in Korea remains relatively unchanged, and the technological gap between Korea and the United States remains substantial.
- Korea's technology "balance of payments" reflects increasing technology imports and utilization, while that of the United States shows a relatively constant scale of technology export.
- Korea's "indigenization" of standard defense procurement has progressed, although reliance on high technology imports of defense items (e.g., helicopters, jet fighters) continues, but probably at a diminishing rate.

These conclusions indicate that South Korea's enhanced economic and technological capabilities and their growth prospects should enable it to bear a larger share of the joint costs and responsibilities of the U.S.-Korean alliance, subject to appropriate alliance agreements and coordination between U.S. and Korean security policies.

Despite Korea's substantial economic and technological expansion relative to the United States, pressures and constraints on its defense spending limit South Korea's burden-sharing capabilities, as discussed in Sec. 2. These pressures arise from various sources: changes in internal political forces resulting from general democratization; the emergence of politically influential views that the North Korean threat is diminishing, as is the prospect of North Korea receiving support from China and the Soviet Union; and the evident need for additional resources to meet the costs of improving Koreans' welfare and for relieving pressures in the private sector for higher wages and fairer distribution of income for farmers and workers. Although these developments are generally encouraging and may portend an eventual decrease in defense requirements, in the interim they may limit South Korea's ability to increase military spending to compensate for U.S. drawdowns.

In the U.S. case, strong pressures and constraints on defense spending arise from other sources: for example, the evident decrease in the Soviet threat, the expectation of an appreciable "peace dividend" from defense savings to be used for either budget deficit reduction or other

domestic priority needs, and the increasing belief that U.S. economic competitiveness should be helped by diverting resources from defense into the commercial sector.

In view of these constraints on both sides, it is desirable for the two countries to pursue burden-sharing issues in a coordinated manner to avoid imposing unexpected increases in Korea's defense spending as a result of an abrupt change in U.S. policy. Furthermore, the technological comparisons suggest that there are limits on the improvement of weapon quality that Korea can accomplish on its own. In this regard, U.S. policy toward technology transfer may be an important instrument to encourage Korean burden-sharing.

4. U.S.-KOREAN FORCES AND RESPONSIBILITIES

The uncertainties and instabilities surrounding the peninsula, the changing relative economic and technological capabilities of the two allies, and the tightening resource constraints, discussed in Secs. 2 and 3, will bear directly upon combined force structure development in the coming decade.

COMBINED FORCE STRUCTURE DEVELOPMENT

To deter a large-scale military conflict in the Korean Peninsula and to defeat it if deterrence fails, the two allies should strive to optimize their combined combat capabilities. This requires that they concentrate their efforts on their respective comparative advantages. For instance, the United States is at a disadvantage in quickly supplying large ground forces to the peninsula. Moreover, activation and training of large numbers of ground force divisions is time-consuming and expensive. On the other hand, U.S. land- and sea-based aircraft exist in large numbers and can be quickly deployed from one theater to another. It would be inefficient for South Korea to provide a large air capability in a timely fashion. The U.S. comparative advantage lies in providing air and sea power, while that of Korea lies in ground forces.

Several benefits follow from this argument: enhanced ability to respond to crises, potential use of existing U.S. multipurpose forces in the region without significant additional costs, lower dollar and manpower costs, and reduction in Korea's resource requirements. These advantages outweigh the potential disadvantages of the opposing case. The latter argues for balanced, multiservice force improvements on each side, pointing toward self-defense without reliance upon others. This view gains support from those who believe that instability and unpredictability in the international arena make it imprudent to rely on an enduring alliance.

U.S. ground forces in Korea should be traded off against stronger U.S. air and naval forces, with provisions for sufficient ground forces to maintain a "trip wire" in case of North Korean attack. This implies that U.S. ground forces should be drawn down but that U.S. air forces should be maintained in Korea. Moreover, a joint planning staff should be maintained to augment reinforcement capabilities in case of

a crisis. Planning should envisage the withdrawal of U.S. ground forces together with efficient division of ground, air, and naval roles and responsibilities and an expanded role for the alliance in regional or global contingencies. In the latter instance, consideration should be given to the possibility of reconfiguring U.S. ground forces to enhance their mobility, deployability, and operability outside the Korean peninsula, as an alternative to their withdrawal from Korea. The aim of this reconfiguration would be to maintain the U.S. presence and commitment in Korea while deriving additional value from the assets deployed there.

The RAND team has suggested four force-reduction alternatives that would maintain a trip wire, reduce support and/or combat units, and provide for Korean augmentations to maintain equivalent combat effectiveness. RAND's calculations of force effectiveness for the combined forces indicate that their combat power would be at least equivalent to the present level. The U.S. reductions could be executed sequentially or implemented independently. RAND's third alternative would entail estimated savings of operations and support dollar costs of \$1.6 billion annually and increased total investment costs to Korea of \$7.8 billion. KIDA has analyzed the force reduction of U.S. forces and has accepted them in principle. KIDA has also analyzed the Korean augmentations with a view to possible U.S. reductions and with the objective of filling the gap between North Korean forces and the reconfigured Korean-U.S. combined force.

The four alternative Korean and U.S. force structures developed by the RAND team were designed to meet two criteria: first, to augment Korean forces, responsibilities, and burdens while reducing those of the United States; second, to maintain the combat capabilities of the alternatives at a level at least equivalent to that of the present combined Korean and U.S. forces. Thus, the capabilities of the four illustrative alternatives are not directly compared in the RAND work to the capabilities of North Korea's forces—a subject about which there are many uncertainties as well as differing evaluations in both the United States and Korea. In other ongoing RAND work, attention is being devoted to this comparative North-South evaluation.

We have identified a range and schedule for U.S. force reductions under the assumption that the current geostrategic trends in the region continue, that significant progress is made in South-North Korean relations, that the U.S. defense commitment is firm with U.S. Air Force and a trip-wire ground force in the region, and that Korea will devote sufficient resources to defense for the next decade.

Assuming these conditions are met, reduction of two U.S. infantry brigades in the time frame 1995-1996, while maintaining the U.S. Air Force in Korea with a suitable reinforcement plan, can be carried out without impairing combined deterrence capabilities.¹ The remaining U.S. air forces, along with the 2nd Infantry Division headquarters and one of its brigades, will contribute to maintaining combined combat capabilities and providing a symbolic and significant trip-wire.

To preclude possible North Korean miscalculation, further force drawdowns should be linked to specific changes in North Korea's political and military posture, as noted in Sec. 2. To support the firmness of the U.S. defense commitment, the present CFC structure should be maintained together with a declaratory policy strengthened by regular joint military exercises.

To compensate for the U.S. force drawdown and enhance the combined combat capabilities, Korea needs to restructure its Force Improvement Programs. If Korea is to reduce to an acceptable level the existing and anticipated force imbalance created by the persistent North Korean military buildup and the U.S. force drawdowns, it will have to allocate additional resources for defense during the next ten years. Then, the prospect of successful defense against possible North Korean surprise attack will be much greater.²

Combat simulations at KIDA demonstrate that an increase of about 1.5 percent of GNP over the next decade would provide sufficient resources to contain a North Korean attack. However, U.S. air and naval power must be available, and South Korean ground forces must be improved to ensure this outcome.

New developments in the South Korean domestic situation create uncertainty as to whether the necessary level of defense efforts will be forthcoming to effectively close North Korea's "window of opportunity." In light of these resource constraints, it is imperative that Korea maximize the effectiveness of currently available resources by enhancing ground components at least to the levels suggested in Table 1.

¹See Oh et al., 1990, for details. KIDA investigated the effect of combat outcomes of varying the GNP share of defense from 4.5 to 6 percent during the period 1991-2000. According to these simulations, a minimum of 4.5 percent with force modernization concentrated on improvement of ground forces would enhance South Korean capabilities sufficiently to hold a North Korean attack north of Seoul. An increase to 6 percent over this period would improve the defense markedly, assuming that USAF support is available.

²Oh et al., 1990. Also supported by other RAND work of Hayes and Schank.

Table 1
Possible Changes in ROK-U.S. Force Levels

Ground Components	1995	2000
Mechanized infantry division	+3	+2
Nondivisional artillery:		
155 mm (T) BN	+20	+12
MLRS BN	+14	+20
U.S. division	-2 to 3	—

NOTE: The baseline year is 1990. Thus, +3 indicates an increase of three mechanized divisions by 1995.

The illustrative force improvement and drawdown options should be conditional on progress in arms control between the two Koreas as well as other possible favorable strategic developments in the region.

ROLES, RESPONSIBILITIES, AND COMMAND STRUCTURE

Since Korea is to provide ground forces, and the United States is to provide air and naval forces for the combined defense, Korea can better assume roles and missions closely associated with ground components. Korea's agreement to assume major army command responsibility, such as the Ground Component Command of CFC, reflects this principle. Transfer of CFC responsibility from the United States to Korea should not be hasty, to avoid misunderstanding by North Korea and to prevent doubts about the U.S. resolve to defend the peninsula.

The KIDA team views the maintenance of the present combined command structure through 2000 as especially significant for symbolic reasons, while the RAND team is less convinced of this. However, if the political situation in North Korea reduces military tension, then peacetime operational control should pass to South Korea. If this occurs, an ROK-U.S. Combined Defense Planning Council should be considered to replace CFC.

COST SHARING

The intricacy of cost-sharing results from the collective benefits of the U.S.-Korean alliance, as noted earlier.³

³Oh et al., 1990, discusses this issue at greater length. Though Combined Defense Improvement projects and other military constructions are funded by agreement cover-

The present practice is to have a yearly negotiation to establish Korea's cost-sharing component for the following year. This yearly negotiation tends to confuse public understanding of the Korean contribution. The process fails to inform the public in both countries what the cost-sharing goals are and how they will be attained over time. It would, therefore, be useful for the negotiations over cost-sharing to be clearly understandable and conducted according to an agreed-upon set of rules.⁴

Building on current U.S. and Korean policy, it would be useful to establish a series of long-term cost-sharing objectives commensurate with South Korea's enhanced capabilities, as summarized in Sec. 3. This will allow each government to establish a series of intermediate-term objectives as well as a time profile of cost-sharing for intervening years.

ing several years, sharing all other recurring costs, such as operation and maintenance expenses, has basically been negotiated on an annual base.

⁴A set of variants of indexation formulae has been suggested in other places. These indexation formulae are also hard to understand; see Oh et al., 1990.

5. CONCLUSIONS

The Republic of Korea's economic and political accomplishments of the past two decades rank among the most notable achievements in the free world. Its GNP has risen from \$67 billion (in 1986 dollars) in 1970 to over \$270 billion in 1990; its share in the global product has increased by 50 percent; and its per-capita GNP in constant dollars has risen from \$2100 in 1970 to over \$6000 in 1990. In the aggregate, its economy is six or seven times that of North Korea, and its per-capita income about three times that of the North. In the 1990s, the ROK annual growth rate will be between 5 percent (according to RAND estimates) and nearly 7 percent (according to some Korean estimates)—in either case exceeding that of the North by at least 50 percent.

Korea's political development in this period, while obviously harder to calibrate, has also been significant. Korea has emerged as a new democracy characterized by the strengths and opportunities, as well as the vulnerabilities and uncertainties, of that status. To build on the strengths and protect against the vulnerabilities is the principal challenge it faces in the 1990s.

The changes that have occurred in Korea's geostrategic position are of equal significance. Until recently, South Korea was precariously surrounded by two enormous and presumptively hostile neighbors—China and the Soviet Union. The fundamental changes that have ensued in both countries, while unique to each, have led to a similar result: For both China and the Soviet Union, reduction of tensions on the peninsula now accords with their respective national interests. In effect, changes in the internal circumstances of China and the Soviet Union have increased South Korea's relative importance to them, especially in light of the Republic's remarkably expanded economic and technological capabilities. The Soviet Union's recognition in 1990 of South Korea and Gorbachev's unprecedented visit there in 1991 are reflections of these changes. This altered strategic environment will tend, over time, to reduce North Korea's threat to the South.

In light of these notable changes in South Korea and in its external geostrategic position, South Korea can and should now aspire to assume the principal burden of its own defense against possible aggression from the North. The feasibility of realizing this assumption is il-

lustrated by the joint RAND and KIDA formulations of alternative Korean and U.S. force structures.¹

Moving in this direction would entail an increased cost burden of perhaps 1.5 percent of the Korean GNP. The problem and the challenge are how to assume these increased costs in the face of seriously competing claims for scarce resources in Korea (e.g., for increased social welfare obligations, rising labor costs) and how to do this at a pace and in a manner that sustain rather than erode the U.S.-Korean alliance. While noting these important qualifications and concerns, it is also worth emphasizing that, in the absence of substantial progress in this direction, erosion of the alliance may also ensue as a result of political and economic pressures within the United States, especially the altered character of public attitudes and the play of domestic politics in the United States.

We draw several conclusions from these considerations and from the underlying RAND and KIDA research referred to above:

1. The United States and South Korea should reaffirm the mutual importance of sustaining their close alliance. For Korea, this importance is connected with the reassurance that it provides against the possibility of destabilizing developments on the peninsula and in the Asian region. For the United States, the alliance is important as a significant asset in the emerging, if still inchoate, structure of collective and cooperative global security arrangements on the Korean Peninsula, in the Asian region, and in the world at large.
2. In light of the long-term global and regional political, economic, and strategic trends previously described, South Korea and the United States should formally declare their intention for Korea to be principally responsible by 2000 for its own defense, while at the same time reemphasizing that the scope of the alliance should extend beyond purely peninsular concerns. Implementation of this intention depends on (a) an augmentation of Korean military capabilities in number or quality, (b) successful progress in arms-control negotiations with North Korea and appropriately accommodating behavioral changes by the North, or

¹For example, as noted earlier, the preferred KIDA plan for force improvement optimizes the combined Korean and U.S. forces by augmenting Korean ground forces, while those of the United States are diminished by approximately two-thirds. One of the illustrative Korean-U.S. force structure alternatives formulated by the RAND team similarly substitutes augmented Korean ground forces for those of the United States while maintaining U.S. air support. The role of U.S. reinforcement capabilities, as well as their reliability, is crucial in both cases. See above, pp. 12-14.; and Oh et al., 1990.

- (c) a combination of both of these developments. In addition, the changing global trends warrant more attention to extending the scope of the alliance beyond purely peninsular concerns. This depends on the development of closer and more extensive consultative relationships between the United States and Korea within the alliance framework.
3. While efforts continue along these lines, it seems appropriate, in light of the relative growth of Korea's economic and technological capabilities,² for the United States and Korea to negotiate increased sharing by Korea of the costs of the remaining U.S. forces, especially costs relating to construction and investment connected with U.S. air forces in Korea. For various reasons relating to public attitudes and domestic politics in both the United States and the Republic of Korea, there are limits to how far the sharing of operations and maintenance costs of U.S. forces should proceed.
 4. In implementing the preceding points, augmentation and modernizing of Korean forces to replace U.S. forces should reflect the principle of comparative advantage by focusing on Korean ground-force capabilities while retaining U.S. air and naval force capabilities. In addition, we should transmit clear signals concerning the vitality of the alliance by several means: through intensified combined Korean-U.S. exercises, extensive standardization and interoperability of equipment and command-control compatibility, and through the establishment in Seoul of a Korean-U.S. Combined Defense Planning Council after transfer of peacetime operational control to Korea.
 5. It is also possible to provide similar signals by certain nonmilitary measures as well: for example, increases in U.S. commercial and financial involvement in Korea, especially by highly visible major U.S. firms, responding to increased access and stronger economic incentives within Korea itself. In the latter connection, effective management of U.S. economic disputes and relationships with Japan will have significant side-effects on the U.S.-Korean alliance and how the alliance is perceived in North Korea as well.

²See Wolf and Han, 1991.